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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/525,375

02/23/2005

Robert Wuest

016915-0278

5186

22428 7590 07/31/2008

FOLEY AND LARDNER LLP
SUITE 500
3000 K STREET NW
WASHINGTON, DC 20007

EXAMINER

YOO, REGINA M

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

07/31/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/525,375	Applicant(s) WUEST, ROBERT	
	Examiner REGINA YOO	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 5-14 is/are pending in the application.
- 4a) Of the above claim(s) 11-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 5-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

The amendment filed on 3/11/2008 has been received and claims 1 and 5-14 are pending.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/02/2008 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession

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of the claimed invention. Specifically, there is no written description that discloses the degree of openness around the periphery (i.e. "essentially completely") of the pair of parallel boards.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 1 recites the limitation "the space" in line 15. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
9. Claims 1, 5-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cox (4511552) in view of Palinczar (4339550), Shah (WO 2001/78794) or Shepherd (3567118), Hoyt (5304358) and Colon (5460787).

As to Claim 1, Cox ('552) discloses a method for deodorizing large-scale plants where a malodorous solid or liquid material is stored open-air and treating unpurified air above the surface of the malodorous material with volatile active deodorizing agents that react with or mask the malodorous substances that the unpurified air contains by releasing the volatile active agent slowly over an extended period of time (see entire document, particularly Col. 1 lines 8-11 and Col. 5 lines 27-46) wherein the air freshening/deodorizing device is located above the surface of the malodorous material or at the edge of the large-scale plant and a stream of air from natural wind flows over the air freshening composition/device to release the volatile active agents (see entire document, particularly Col. 7 lines 55-59).

Cox ('552) does not appear to specifically teach that the volatile active agents are dispersed in a matrix of a crosslinked polymer comprising hydrophilic groups, nor that the crosslinked polymer comprises a condensation products of a maleinized or epoxidized polymer and a polyamine as the crosslinking agent or a copolymer of a monofunctional (meth)acrylic monomer and a polyfunctional (meth)acrylic monomer as the crosslinking agent, nor that the spongelike composition is incorporated between two parallel boards essentially completely open on all sides where a stream of air from

natural wind flows between the parallel boards and over the spongelike composition, nor that the space between the boards is between 2 and 20 cm, or that the crumbs, boards or strips of the spongelike composition are 0.5 to 3 cm wide.

As to the limitation that the volatile active agents are dispersed in a matrix of a crosslinked polymer comprising hydrophilic groups, Palinczar ('550) discloses a method of deodorizing comprising: treating unpurified air with volatile active agents, wherein the volatile active agents are dispersed in a matrix of a crosslinked polymer comprising hydrophilic groups and form, with this, a spongelike composition in order to react with or mask the malodorous substances that the unpurified air contains by releasing from the spongelike composition the volatile active agents over a period of time (see entire document, particularly Abstract, Col. 2 lines 3-35, Col. 3 lines 4-19 and Col. 6 lines 44-51).

It would have been obvious to one of ordinary skill in this art at the time of invention to provide the volatile active agent in a spongelike composition that is a matrix of a crosslinked polymer comprising hydrophilic groups, as an alternate means to incorporate volatile active agents into an air freshening/deodorizing device, in the method of Cox in order to impregnate then to release volatile active agents that will mask malodors as shown by Palinczar.

As to the limitation that the crosslinked polymer comprises a condensation product of a maleinized or epoxidized polymer and a polyamine as the crosslinking

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agent, while Palinczar ('550) discloses that a matrix of a crosslinked polymer is used as a substrate for fragrance impregnation, Palinczar ('550) does not appear to specifically teach that the substrate in the form of a crosslinked polymer comprises a condensation product of a maleinized or epoxidized polymer and a polyamine as the crosslinking agent.

It was well known in the art at the time of invention to also produce a matrix of a crosslinked polymer from a condensation product of a maleinized polymer and a polyamine as the crosslinker as a substrate for a volatile active agent impregnation. Shah ('794) exemplifies that the element in which the active agent is dispersed in is a matrix of a crosslinked polymer wherein the crosslinked polymer is a condensation product of a maleinized polymer (see entire document, particularly Abstract and page 4, lines 2-21) and a polyamine as the crosslinking agent (see entire document, particularly page 4, lines 22-37 through page 5, lines 1-7) in order to retain then release active agents that perfume or deodorize air over a period of time (see Abstract).

It would have been obvious to one of ordinary skill in this art at the time of invention to provide a matrix of a crosslinked polymer produced from a maleinized polymer and a polyamine crosslinker as an alternate substrate/carrier means in the method of Cox as modified by Palinczar and Hoyt in order to deodorize air by emission of volatile active agents from such substrate as exemplified by Shah.

As to the limitation that the crosslinked polymer comprises a copolymer of a monofunctional (meth)acrylic monomer and a polyfunctional (meth)acrylic monomer as

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the crosslinking agent, while Cox ('552), Palinczar ('550) and Hoyt ('358) disclose that active agents are impregnated on a carrier medium, neither Cox ('552) nor Palinczar ('550) or Hoyt ('358) appears to specifically teach that the crosslinked polymer is a copolymer of a monofunctional (meth)acrylic monomer and a polyfunctional (meth)acrylic monomer as the crosslinking agent.

It was known in the art at the time of invention to utilize a copolymer of a monofunctional (meth)acrylic monomer and a polyfunctional (meth)acrylic monomer as the crosslinker in manufacture of a matrix of a crosslinked polymer for use as a substrate/carrier for deodorization purposes. Shepherd ('118) discloses that a matrix containing the active agent is produced from a crosslinked polymer wherein in the crosslinked polymer is a copolymer of a monofunctional (meth)acrylic monomer (see entire document, particularly Col. 1, lines 62-73) and a polyfunctional (meth)acrylic monomer as the crosslinking agent (see entire document, particularly Col. 2, lines 3-9) and applied to a substrate in order to improve impregnation by the fragrance and to prolong entrapment of the fragrance by the substrate (see entire document, particularly Col. 1, lines 30-34 and Col. 2, line 63).

It would have been obvious to one of ordinary skill in this art at the time of invention to provide such components in the method of Cox as modified by Palinczar and Hoyt as an alternate ingredient/composition of the matrix of crosslinked polymer that forms the substrate/carrier in order to entrap and prolong release of active agents as shown by Shepherd.

As to the limitation that the spongelike composition is incorporated between two parallel boards essentially completely open on all sides, it was well known in the art at the time of invention to incorporate a fragrance impregnated material in between two parallel boards that are open on all sides.

Hoyt ('358) exemplifies a air freshener (10) wherein a fragrance carrying member (25) is retained between two parallel boards (11, 12) that is open on all sides via the peripheral vents where a stream of natural wind flows between the parallel boards and over the fragrance-carrying member via the passageways (see entire document, particularly Figures 1-8, Col. 1 lines 61-64 and Col. 4 lines 3-20) in order to retain a fragrance-carrying member to release the volatile active agent to the environment.

It would have been obvious to one of ordinary skill in this art at the time of invention to provide a structure in the form of two parallel boards with the spongelike composition of Palinczar in order to retain and release a volatile active agent such as a fragrance from a fragrance-carrying member such as the spongelike composition to the environment without damaging the fragrance-carrying member or other objects in the environment as exemplified by Hoyt.

While Hoyt ('358) does not appear to specifically teach that the sides of the two parallel boards are essentially completely open, it would have been obvious to one of ordinary skill in this art at the time of invention to omit all or most of the standoffs (23, 24) around the periphery of the pair of parallel boards (11, 12) in Hoyt to provide an essentially completely open sides in order to increase/expedite the emission of the essence or fragrance from the fragrance carrying member (25) as the standoffs will

present obstacles for the flow of evaporated scent traveling through internal passageways (between/among 26 and 31 which already provides the function of retaining the fragrance carrying member) (see MPEP §2144.04 Section II.A, which states that omission of an element and its function is obvious if the function of the element is not desired, particularly in regards to discussion about “omission of additional framework and axle which served to increase the cargo carrying capacity of prior art...would have been obvious if this feature was not desired”).

As to the limitation that the space between the boards is between 2 and 20 cm, and that the crumbs, boards or strips of the spongelike composition are 0.5 to 3 cm wide, while Hoyt ('358) discloses that lattices (formed by projections 26, 31) are incorporated between the parallel boards (11 and 12) in order to retain the scented carrier within that is in the form of a board/strip (see entire document, particularly Figure 8, Col. 3, lines 54-57 and Col. 4, lines 17-20), neither Cox ('552) nor Palinczar ('550), Shah ('794) nor Shepherd ('118) or Hoyt ('358) appears to specifically teach that the spongelike composition is in the form of boards or strips with the width dimension of 0.5 to 3 cm or that the space between the boards is between 2 and 20 cm.

It was known in the art at the time of invention to provide a fragrance-carrying member in the form of a board of various width including boards with width between 0.2-5 cm. Colon ('787) discloses that the a board impregnated with at least one fragrance has a width from 1.5 - 2.5 inches (3.81 - 6.35 cm) in order to fit within the holder for the scented board (see entire document, particularly Col. 9, lines 10-15).

While Colon ('787) does not appear to specifically teach either of the dimensions, it would have been obvious to one of ordinary skill in this art at the time of invention to provide the board with width of 0.5 to 3 cm and spacing between 2 and 20 cm for the parallel boards in the method of Cox as modified by Palinczar, Shah or Shepherd and Hoyt in order that the volatile active agent carrier is sized correctly to fit within the holder as shown by Colon and to promote desired ventilation through the boards. Moreover, see MPEP §2144.04 Section IV.A, changes in size/proportion would have been obvious and would not establish patentability in a claim when the difference between the prior art process and claimed invention is mere scaling up of a prior art process capable of being scaled up or where the only difference between the prior art and the claims was a recitation of relative dimension of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device.

As to Claim 5, while both Cox ('552) and Palinczar ('550) disclose that the volatile active agents are released slowly and uniformly over a period of time, neither Cox ('552) nor Palinczar ('550) appears to specifically teach that the volatile active agent is released over a period of at least three days. However, as Cox ('552) discloses that the release of the volatile active agent occurs over an extended period of time (see Abstract) and as Palinczar ('550) also discloses that the objectives of the invention is for "express purpose of sustained release of the volatile materials from the foam" and use "a wide range of "control release ingredients", ...[to] aid in producing a sustained release effect" (see Col. 2 lines 3-25), it would have been obvious to one of ordinary

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skill in the art to that an extended period will include at least three days and it would have been also obvious to one of ordinary skill in the art to adjust and modify the composition or the pore size of the foam product of Palinczar in order to achieve a sustained release of the volatile active agent in order to mask the malodor for a desired time period such as at least for three days.

As to Claims 6-7, Palinczar ('550) discloses that the volatile active agents such as natural lemon oil and peppermint oil and menthol (see entire document, particularly Col. 7 lines 27, 41 and 54 and Col. 8 line 29) are present in amounts of 10 to 90% by weight of the spongelike composition (see entire document, particularly Col. 6 lines 6-10).

As to Claim 8, Palinczar ('550) discloses that the spongelike composition contains at least 0.1% weight, preferably 1 to 8% by weight, of water (see entire document, particularly Col. 6 lines 27-31).

As to Claim 10, while Cox ('552) discloses that a number of deodorizing devices are distributed in the large-scale plant or arranged around its edge (see Col. 7 lines 52-53), neither Cox ('552) nor Palinczar ('550) or Hoyt ('358) discloses that a number of parallel boards are provided. However, it would have been obvious to one of ordinary skill in the art to provide multiple air freshener/deodorizer as shown by Cox but in the form of parallel boards in the plant in order to ensure that adequate amount of the

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volatile active agents is present for complete masking of the malodor by providing a multiple freshener/deodorizer as disclosed by Cox.

Thus, Claims 1, 5-8 and 10 would have been obvious within the meaning of 35 U.S.C. 103(a) over the combined teachings of Cox ('552), Palinczar ('550), Shah ('794) or Shepherd ('118), Hoyt ('358) and Colon ('787).

10. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cox (4511552) in view of Palinczar (4339550), Shah (WO 2001/78794) or Shepherd (3567118), Hoyt (5304358) and Colon (5460787) as applied to claim 1 above, and further in view of Welch (20030024997).

Cox ('552), Palinczar ('550), Shah ('794) or Shepherd ('118), Hoyt ('358) and Colon ('787) are relied upon for disclosure described in the rejection of claim 1 under 35 U.S.C. 103(a).

While Cox ('552), Palinczar ('550) and Hoyt ('358) disclose that active agents are released over an extended period of time, neither Cox ('552) nor Palinczar ('550) or Hoyt ('358) appears to specifically teach that the active agents are slowly and uniformly released from the carrier over a period of at least three days.

It was known in the art at the time of invention to provide a method of fragrance release over at least three days. Welch ('997) discloses that the active agents are released slowly and uniformly from the spongelike composition over a period of at least

three days in order to provided a sustained perfume release rate (see entire document, particularly page 25, paragraph [0220]).

It would have been obvious to one of ordinary skill in this art at the time of invention to provide the release rate of at least 3 days from the substrate/spongelike composition in the method of Cox as modified by Palinczar and Hoyt in order to apply the active agent to freshen and deodorize the targeted area for an extended duration of at least three days as shown by Welch.

Thus, Claim 5 would have been obvious within the meaning of 35 U.S.C. 103(a) over the combined teachings of Cox ('552), Palinczar ('550), Shah ('794) or Shepherd ('118), Hoyt ('358), Colon ('787) and Welch ('997).

11. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cox (4511552) in view of Palinczar (4339550), Shah (WO 2001/78794) or Shepherd (3567118), Hoyt (5304358) and Colon (5460787) as applied to claim 1 above, and further in view of Johnson (5071645).

Cox ('552), Palinczar ('550), Shah ('794) or Shepherd ('118), Hoyt ('358) and Colon ('787) are relied upon for disclosure described in the rejection of claim 1 under 35 U.S.C. 103(a).

While Cox ('552), Palinczar ('550) and Hoyt ('358) disclose the method of using matrices/compositions for air freshening purposes, neither Cox ('552), Palinczar ('550) nor Hoyt ('358) appears to specifically teach that these matrices contains additionally flame retardants, sublimation assistants and/or powder.

It was known in the art at the time of invention to provide additional components such as a flame retardant in the spongelike matrix used as a substrate/carrier for fragrance/deodorizer impregnation. Johnson ('645) discloses an active agent delivery device in which a microporous material (see entire document, particularly Col. 1, lines 41-44) is impregnated with a releasable active agents such as fragrances (see entire document, particularly Col. 1, lines 67-68) along with flame retardant (see entire document, particularly Col. 4, lines 54-55) in order to avoid ignition of the substrate/carrier (i.e. the microporous material) during use.

It would have been obvious to one of ordinary skill in this art at the time of invention to provide a flame retardant in the method of Cox as modified by Palinczar and Hoyt in order to ensure that the substrate/carrier will not ignite so that it will not be a source of fire hazard during the deodorization process as shown by Johnson.

Thus, Claim 9 would have been obvious within the meaning of 35 U.S.C. 103(a) over the combined teachings of Cox ('552), Palinczar ('550), Shah ('794) or Shepherd ('118), Hoyt ('358), Colon ('787) and Johnson ('645).

Response to Arguments

12. Applicant's arguments with respect to claims 1, 5-8 and 10 have been considered but are moot in view of the new ground(s) of rejection.

13. Applicant's arguments filed 3/11/2008 have been fully considered but they are not persuasive. Specifically, as to the Applicant's argument that "the air fresheners described in Hoyt, Colon, Shah, Shepherd, and Welch are air freshening or deodorizing

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devices which may be used in households or confined/closed spaces, used by a static process [where this process] ...differs greatly from the dynamic process of the presently claimed invention, utilizing deodorizers in open-air, large-scale plants [where] the devices disclosed in Hoyt, Colon, Shah, Shepherd, and/or Welch would not be used in the presently claimed invention [and]...consequently, it would not have been obvious to combine Hoyt, Colon, Shah, Shepherd, and Welch with Cox and apply this combination to deodorizing large-scale plants as in the presently claimed invention”, Examiner would indicate that the Applicant has not specifically or sufficiently as to why the combination above would not have been obvious to be used in industrial setting as well. Examiner would point out that mere argument does not replace evidence where evidence is necessary and that Applicant has not supplied any evidence that will establish inoperability of the prior art for use in industrial setting as claimed (see MPEP § 2145 Section I and MPEP § 716.01(c)).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to REGINA YOO whose telephone number is (571)272-6690. The examiner can normally be reached on Monday-Friday, 10:00 am - 7:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on 571-272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Elizabeth L McKane/
Primary Examiner, Art Unit 1797

RY